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REPORTS ON NEW AUTOMATICS;
TRANSFER MACHINE-TOOL LINES

AUTOMATIC TRANSFER MACHINE-TOOL LINE READY FOR DISPATCH -- Moscow, Moskovskaya Pravda, 29 Mar 51

In 1950, two automatic transfer machine-tool lines were constructed at the Moscow Stankokonstruktsiya (Machine-Tool Building) Plant. The assembly of another such line has just been completed. This is intended for the production of graduated steel shafts, 250-650 millimeters long and 20-80 millimeters in diameter.

Making automatic the manufacture of these extremely complex and essential parts is a new achievement in machine-tool building, according to A. Ye. Prokopovich, Stalin Prize winner and deputy director of the ENIMS (Experimental Scientific Research Institute for Metalcutting Machine Tools).

As the steel blanks approach the automatic line, a special grasping device takes each blank in order and presents it to the first machine tool, where it is clamped. The workpiece undergoes the following operations in successive order, passing from one machine to the next: facing, centering, rough turning along its entire graduated surface, finish turning, keyway milling, knurling, and precision surface grinding.

All operations are completely mechanized. The metal blank which enters the machine-tool line emerges from this huge aggregate as a completely finished, graduated shaft, machined to specified size and shape. The most important factor in this technological "chain" is that simultaneously with the machining process, the quality of the work is checked automatically as it undergoes each operation. If the machine goes out of order, the operation stops automatically. In this way, there are absolutely no rejects, and there is the assurance that the products will be only of high quality.

The entire production process is controlled by one person at a central control panel. By a special system of signals he can determine the working condition of each machine tool. At the slightest trouble, a signal is given to the adjuster, who quickly corrects the trouble.

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The new automatic line excels previous lines by its better performance. In comparison with ordinary work on individual machine tools, it increases labor productivity seven times. The cost of manufacturing graduated shafts is cut four times. Moreover fewer machine tools are needed, and consequently less floor space is required for the automatic line. It is interesting to note that the machine tools designed for this automatic line can also be used individually.

This assembled transfer machine-tool line for the manufacture of graduated shafts is now being adjusted, and the interworking of all mechanisms is being checked carefully. This line will soon be consigned to a machine-building plant, and in its place at the assemble shop of the Stankokonstruktsiya Plant, the assembly of the next automatic line will begin.

Innovators and machine-tool builders are proudly asserting that facilities now exist for the organization of series production of such lines and soon will occupy an important place at Soviet plants.

PLANT GETS MACHINE-TOOL LINES -- Moscow, Izvestiya, 23 Mar 51

New six-spindle semiautomatic lathes have been received at the Tallin Vol'ta Electrical Machine Building Plant from the Moscow Krasnyy proletariy Plant. The productivity of these semiautomatics is 45 times greater than that of ordinary lathes.

This plant has also received automatic transfer machine-tool lines from the Moscow Stankokonstruktsiya Plant. These lines are designed for machining shafts and rotors for electric motors.

Tallin, Sovetskaya Estoniya, 31 Mar 51

The assembly of an automatic transfer machine-tool line for the manufacture of shafts for electric motors has been planned at the Tallin Vol'ta Plant.

The machine tools for this line were manufactured at the Moscow Stankokonstruktsiya Plant.

All equipment for this automatic line has been received at the Vol'ta Plant, and preparations for its assembly are in progress.

Putting this line into operation will increase considerably the output of shafts for electric-motor rotors.

LENINGRAD AUTOMATICS PLANT LAGS -- Leningradskaya Pravda, 29 Mar 51

During 1950, the production of six new types of machine tools was mastered at the Leningrad Automatics Plant. Some of these are original in design, and represent a very valuable technical innovation. Among these machine tools are automatics produced for cutting nickel pipes and wire, and for milling twist drills.

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The most interesting innovation permitting the complete mastery of a new principle is an automatic for broaching slots on screw heads. Its productivity is unusually high: more than 100,000 parts per shift.

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Despite this, however, many plant workers, in particular, Stakhano-
vites, foremen, and chiefs of assembly sections, are not at all inclined
to overrate the merits of their workers. They say, "We are mastering the
production of new machine tools very slowly, and each goal achieved has
been very costly to us." This opinion reflects an actual fact.

Work began to drag from the very first stage in the preparation of new
machine-tool production. This was the designing stage. Drawings were de-
layed for a month and sometimes longer. This naturally delayed the formula-
tion of all technical data, and disrupted and confused all schedules and all
preliminary calculations. One plant engineer justly noted that the designers
performed their duties at a turtle-like pace. Technologists then had to rush
or fail to meet their deadlines. By the time the working materials reached
the shops, little time remained for the shop workers to master the produc-
tion of new machine tools, and then followed the last-minute speed up.

The main failing of plant managerial personnel was the lack of care in
perspective production planning, and daily checking of scheduled fulfillment.
For this reason, the machine tools which were scheduled for manufacture in
March and April were produced in July, August, or even later.

The ministry admitted that the plant did not complete its plan in 1950
in the number of types of parts, and that it did not master the production
of these parts. In particular, the plant did not complete its assigned task
of manufacturing an experimental model of a new automatic turret lathe,
Model 1136.

The shop workers complain with reason that since the drawings continue
to be delayed, the development of technological processes and the manufac-
ture of new types of equipment and tools continue to be held up.

"We are seriously alarmed about the fate of the new special automatic,
Model 1A136," says N. I. Kiuru, chief of the small-series shop. "1A136 is
probably a modification of 1136." "This machine tool was included in the
April program; however, as yet, neither the drawings nor the blanks for
it have been received."

Instead of three new automatics, only one was produced for the watch
industry during the first quarter. The target dates for the other machines,
including a grid-coiling (setkonavival'nyy) automatic, were upset.

In connection with the deadlines set for the production of this new
automatic, P. D. Khizhnyak, director of the plant, assumed a strange posi-
tion. He appealed to the main administration to change the date for its
manufacture to the third quarter.

A whole series of new machine tools have been designated for the first
6-month program. However, the plan for putting their production into full
swing has not been developed.

The plant's managerial personnel and the shops' supervisory personnel
are mostly concerned with the current program. In particular, Bel'dyugin,
chief engineer at the plant, and Lavrent'yev, chief of production, are giving
very little attention to new types of products.

Although the plant has a schedule for preparing the production of new
machine tools, it is hardly noticeable. Disruptions of the schedule for
developing the blue prints, technological processes, or for manufacturing
equipment, models etc. -- all go unnoticed and without punishment. It is
not surprising that recently Khizhnyak recently had to approve another
schedule in which the production of a number of new machine tools was slated
for a later date. If, let us say, a new machine for winding springs was
scheduled for manufacture in February, according to the new schedule, it
would be manufactured in June.

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BUILDS NEW CHECKING, SORTING AUTOMATIC FOR BEARING INDUSTRY -- Moscow,
Moskovskaya Pravda, 21 Mar 51

The bearing industry has received a high-duty automatic for checking and sorting tapered rollers. This complex machine, into which the latest achievements in electrical engineering and pneumatics have been incorporated, was built at the Moscow Kalibr Plant. Sorting on this automatic is 25 times more accurate than formerly. It has replaced the manual labor of dozens of inspectors.

The following men have received a Stalin Prize for developing, manufacturing, and putting these automatics into production: N. Ye. Nikitin and S. M. Shukin, chiefs of designing bureaus; G. I. Ovcharenko, chief designer at the Kalibr Plant; N. N. Isakov, chief of an experimental shop; D. K. Morev, fitter and machinist; and A. I. Boyarov, engineer at the All-Union Electrical Engineering Institute.

PLEDGE AND COMPLETE NEW AUTOMATICS FOR SHIP-BUILDING INDUSTRY -- Moscow,
Vechernyaya Moskva, 1 Mar 51

Workers at the Moscow Kalibr Plant have made the following additional pledges to be fulfilled by the opening day of the Tenth Oblast and Eleventh City Party Conferences: to renovate the No 1 instruments shop, install a conveyer in the round-gauge shop, and increase production 25 percent.

It was also resolved to perfect and put into production eight new checking and measuring automatics.

Moscow, Vechernyaya Moskva, 31 Mar 51

On the opening day of the Eleventh City Party Conference, the Moscow Kalibr Plant completed production of eight checking and measuring automatics for the shipbuilding industry.

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